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Gabriel Costa De Oliveira

Software Engineer

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Currently pursuing a degree in Software Engineering at one of the top universities in the Brazil with over two years of professional experience as a data scientist and backend developer. Additionally, I have been awarded in several competitive programming competitions, demonstrating my strong analytical ability to solve complex problems.

EDUCATION

Bachelor's in Software Engineering,
University of Brasília (UnB)

2019 — 2025

As an **Engineer**, I possess a robust foundation in applied mathematics, with emphasis on foundational topics for artificial intelligence.

RECENT WORK EXPERIENCE

AI.lab UnB

January 2024 — Present

Brasília, DF

Work on the high-impact Osiris Project, resulting from a **investment of \$700,000 USD**, developing AI applications to streamline workflows for **judges and prosecutors** in tax enforcement. Held dual roles as Data Scientist and Backend Developer.

Backend Developer

August 2024 — Present

- Designed and optimized a backend application providing web access to AI models for tax enforcement workflows
- Developed and maintained APIs using **FastAPI**
- Implemented unit and integration tests with **Pytest**
- Applied parallel and distributed programming techniques to reduce processing time
- Created new modules following **microservices** architecture

Data Scientist

January 2024 — August 2024

- Used **MLflow** to store/present experiment results to stakeholders and POs
- Led data mining, cleaning, and augmentation to identify relevant features for classification models
- Implemented **llama3** LLM with **RAG** techniques for legal text classification
- Successfully trained/deployed AI models for legal document classification
- Applied **Machine Learning (scikit-learn)** and **Deep Learning (PyTorch/TensorFlow)**
- Managed data pipelines with **Pandas** and **Parquet**

Zeroo

Android Developer

September 2022 — November 2023

Brasília, DF

- Developed native Android app using Java/Kotlin
- Integrated **AI models** for object classification with **TensorFlow** and **ML Kit**
- Created requirements documentation using Mkdocs
- Implemented MVVM architecture with SOLID principles and **GOF patterns**
- Built relational database using **SQLite3** with Room and LiveData

University of Brasília

DATA STRUCTURES & ALGORITHMS TEACHING ASSISTANT

March 2022 — August 2022

Brasília, DF

Enhanced expertise in algorithms while developing technical communication skills:

- Greedy algorithms
- Dynamic Programming
- Tree structures
- Graph theory
- Complexity analysis (Big-O)

SKILLS

Languages	C, C++, Java, Python, SQL
Tools	Git, Linux, Scikit-learn, TensorFlow, Hadoop, PyTorch, PySpark, MariaDB, MongoDB, MySQL, SQLite3, FastAPI, SQLAlchemy, NumPy, Pandas & pytest
DevOps & QA	CI/CD Pipelines, SonarQube, Unit Testing, Integration Testing, Docker & Kubernetes
Software Engineering	Design Patterns, SOLID Principles, Clean Code, Relational Database Modeling, Messaging Systems, Parallel & Distributed Programming & Microservices
Methodologies	Agile (Scrum, Kanban, XP) & TDD (Test-Driven Development)
Languages	Portuguese (Native) & English (C1)

I possess not only **advanced knowledge in data structures and algorithms** but also a strong analytical ability to solve complex problems. These skills led me to the **ICPC Brazilian Programming Finals** in 2023 and a top placement in IEEEExtreme 17.0. Additionally, these competitions were instrumental in solidifying my **Python and C++** expertise.

ICPC South America Brazil Finals — Honorable Mention

2023

ICPC South America-Brazil First Phase — Qualified for the Brazilian Finals, 66th Place

2023

IEEEExtreme 17.0 — 4th Best Brazilian Team, ranking among the top 14% globally

2023